

Citation for this item

Citation format and information for this document is found at:

<http://hdl.handle.net/2022/18412>

This paper is from:

Dr. Ruth C(lifford) Engs - Presentations, Publications & Research Data Collection.

This collection is found at IUScholarWorks: <http://hdl.handle.net/2022/16829>

When in the collection and within a category, click on “title” to see all items in alphabetical order.

The Collection

This document is part of a collection that serves two purposes. First, it is a digital archive for a sampling of unpublished documents, presentations, questionnaires and limited publications resulting from over forty years of research. Second, it is a public archive for data on college student drinking patterns on the national and international level collected for over 20 years. Research topics by Dr. Engs have included the exploration of hypotheses concerning the determinants of behaviors such as student drinking patterns; models that have examine the etiology of cycles of prohibition and temperance movements, origins of western European drinking cultures (attitudes and behaviors concerning alcohol) from antiquity, eugenics, Progressive Era, and other social reform movements with moral overtones-Clean Living Movements; biographies of health and social reformers including Upton Sinclair; and oral histories of elderly monks.

Indiana University Archives

Paper manuscripts and material for Dr. Engs can be found in the IUArchives

http://webapp1.dlib.indiana.edu/findingaids/view?doc.view=entire_text&docId=InU-Ar-VAC0859

BOOZING AND BRAWLING ON CAMPUS: A NATIONAL STUDY OF VIOLENT PROBLEMS ASSOCIATED WITH DRINKING OVER THE PAST DECADE

Ruth C. Engs

Applied Health Science, Indiana University,

David J. Hanson

Sociology, SUNY, Potsdam, NY

Digitalized for IUScholarWorks Repository: <http://hdl.handle.net/2022/18412>

Abstract

There has been an increase in alcohol-related violent crime in the United States since the early 1980s. Concomitantly there has been a decrease in per capita consumption of alcohol. Cultural Theory suggests that students will follow the trends of society in terms of behaviors such as alcohol consumption and violence related to drinking. Subcultural Theory, on the other hand, suggests that these behaviors will reflect subcultural rather than societal trends. Thus, the purpose of this study was to determine possible changes in drinking patterns and violent behavior related to drinking from 1982 until 1991 with the same sample of universities from all contiguous states in the United States. A secondary purpose was to test the Cultural and Subcultural models of behavior.

Based on a sample of over 4,000 students, at each of four time periods over the past decade, a significant ($p < .001$) decrease in the percentage of students reporting that they had consumed alcohol at least once during the preceding year was found. The percentage declined from 82.4 in 1982 to 78.8 in 1991. Likewise, there was a significant ($p < .001$) decrease in the mean amount of alcohol consumed (14.3 to 12.8 drinks per week between 1982 and 1991). With regard to self-reported violent/legal problems related to drinking, there were significant increases ($p < .001$) in the percentages of students who had "gotten into a fight" (11.6 to 17.2) and had had "trouble with the law" (4.4 to 7.6) between 1982 and 1991 because of drinking. Likewise, there were significant increases ($p < .05$) in the percentages who had engaged in vandalism (9.3 to 10.5) and had had "trouble with the school administration" (1.9 to 2.5) because of drinking. The results of this study support the Cultural Theory of behavior in that the students' drinking and violence related to drinking appear to have followed the trends of the United States as a whole over the past decade.

Introduction

Violence and Drinking Among the General Population

There has been an increase in violent crimes in the United States since the early 1980s. Murder, after an initial decrease in the early 1980s, resumed its increase. It rose from 7.9 to 8.7

per 100,000 population between 1985 and 1989, the latest year for which data have been published. Reported forcible rape also steadily increased, from 35.6 per 100,000 population in 1981 to 38.1 per 100,000 in 1989. Robbery increased during the same time period, as did aggravated assault, which rose from 280.9 to 383.4 per 100,000 population (U.S. Department of Justice, 1983; 1987; 1990).

Many of these crimes are thought to be related to alcohol or other drug abuse (Collins 1984; Leonard et. al., 1985). Based on the reports of crime victims, approximately 36 percent of their assailants were under the influence of alcohol or other drugs; about 23 percent were under the influence of alcohol alone. Victims of rape and assault have been more likely than robbery victims to report that their offenders had used alcohol or drugs. About 23 percent of rape victims have indicated that their assailants were under the influence of alcohol while 25 percent of aggravated assault victims have indicated their assailants had been drinking (U.S. Department of Justice, 1990).

More than half (54 percent) of state prison inmates in 1986 reported that they were under the influence of drugs or alcohol at the time they committed the offenses for which they were currently sentenced. Assailants under the age of 21 were less likely to have been under the influence of alcohol (14 percent) compared to older individuals (28 percent) (U.S. Department of Justice, 1990). However, this increase in violent crimes in the United States has been accompanied by a decrease in alcohol consumption. Per capita consumption peaked in 1980 at 2.7 gallons of ethanol and slowly decreased over the decade. It declined to 2.5 gallons per person in 1987, an 8-percent decrease (Brooks et al., 1989; U.S. Department of Commerce, 1991).

Violence and Drinking Among Youth and College Students

It has been suggested that increased violence among youth since the early 1980s might be a reflection of the general increase in violent crimes (homicide, rape, robbery, aggravated assault) in the United States. A review of the literature by Males (1990) suggests that youth behavior not only mirrored the general increase in violent crimes but also the initial decrease and subsequent increase of night-time fatal crash rates, along with other problem behaviors during the 1980s. Likewise, some studies of the decade have suggested a decrease in alcohol consumption among youth (Johnson et al., 1991) and college students (Engs and Hanson, 1989a; Gonzalez, 1989; Meilman et al., 1990). This appears to reflect the trend of decreasing per capita alcohol consumption in the United States as a whole.

There have been reports of increased violence on U.S. college campuses since the early 1980s. Alcohol-related problems have included vandalism, fighting, injuries, and rape (Abbey, 1991). However, as in the past, crime on campuses frequently was not reported to authorities or not divulged by institutions. Therefore, it is difficult to know if there has been an increase in incidences or just increased reporting. Roark (1987: 367) has suggested that "although comparative data from previous years are difficult to obtain, it seems to many student affairs professionals that there is an increase in violence on campuses." One study reported that residence hall advisors mediated more physical confrontations between students in the mid-1980s compared to previous years (Schuh et al., 1986).

In addition, few empirical studies have examined collegiate-based violent alcohol abuse behaviors in the United States as a whole. One study reported that 81 percent of violent acts against persons or property in residential units were alcohol-related (Rickgarn, 1989). A British

study reported a positive association between heavy drinking [sometimes called "binge drinking"] and vandalism on the campus (West et al., 1990). Reports in the mass media have suggested that there has been increased alcohol abuse, including increased alcohol-related violence, among college students. This perceived increase occurred after passage of the age 21 purchase law in 1987 (Rosenberg, 1990). At one university 53 percent of personal misconduct violations were alcohol-related, which represented an increase of 75 percent over a five-year average for 1986-1990 (Klassen, 1991). Another report implied that, nationwide, alcohol abuse was responsible for 75 percent of violent behaviors on U.S. campuses (Lindsmith, 1991).

Although these media reports have suggested a connection between the increased violence and alcohol abuse and have implied an increase in heavy abusive drinking among students, there is a lack of empirical literature investigating these phenomena on a national level.

Cultural and Subcultural Theory

Culture is the integrated system of learned behavior patterns characteristic of members of a society. Because it is learned, it is not genetically predetermined. It exists in and through symbolic communication. A subculture is a system of learned behavior patterns shared by a group in society, which distinguishes that group from other groups. For a subculture to exist, individuals must identify with the group and have opportunities to interact and share information with other who identify with the group. Institutions such as colleges and universities tend to produce special behavior patterns and thus have a distinct subculture (Bassi et al., 1991).

Cultural Theory suggests that college student alcohol consumption and alcohol-related violence reflect patterns in the larger society in which they occur. Therefore, these behaviors would follow closely any changes in trends in that society. The theory thus would predict a reduction in per capita consumption and an increase in violence related to alcohol, as has been found in the United States over the 1980s (Bierstedt, 1963; Kottak, 1982; Nisbet, 1970; Williams, 1961).

On the other hand, *Subcultural Theory* suggests that college student alcohol consumption and violence related to alcohol reflect a distinct collegiate subculture that encourages drinking and violence related to drinking in a manner that is different from that which characterizes the larger society. Therefore, trends for college students will be independent of trends for drinking and alcohol-related violence in the society at large (Fine, 1987; Fine and Kleinman, 1979; Ogbu, 1974; Reed, 1972; Scarpetti and Datesman, 1980).

Purpose of Study and Hypotheses

This report is part of an ongoing trend study begun in 1982 to investigate behaviors, knowledge, and attitudes related to college student alcohol consumption from a U.S. national sample of four-year institutions of higher learning. Reports from this study have described health, personal, and social consequences of alcohol consumption (Hanson and Engs, 1992; 1986; Engs and Hanson, 1988; 1986), students' knowledge about alcohol and its effects (Engs

and Hanson, 1989a), attitudes toward drinking (Hanson and Engs, 1984), the relationship of demographic characteristics to drinking patterns (Engs et al., 1990; Engs and Hanson 1990; 1985; Hanson and Engs, 1990; 1987), and tests of models and theories (Engs 1990; Engs and Hanson, 1989b).

The purpose of the study reported here was to investigate the trends in both drinking patterns and violent behavior related to alcohol consumption from the early 1980s through the early 1990s in this national sample of colleges and universities. A second purpose was to test Cultural and Subcultural Theory in regard to alcohol consumption and alcohol-related violence in the United States. The null hypotheses were: 1) there was no change in drinking behavior and 2) there was no change in violence related to drinking among university students between 1982 and 1991.

Methods

Instrument

A precoded anonymous instrument, the *Student Alcohol questionnaire* (SAQ), was used to collect data at each of the four time periods. The questionnaire, which remained the same over the decade, includes demographic items on gender and race; six questions concerning the quantity and frequency of wine, spirits, and beer consumption; and 17 items regarding possible negative health, social, and legal consequences of alcohol abuse. The SAQ also contains alcohol knowledge and attitude questions. For this report, four questions related to legal and violent consequences of alcohol consumption were analyzed. Students were asked to indicate if the specific problems had occurred at least once during the preceding year. The six items to determine quantity-frequency and mean amount of alcohol consumed also were utilized.

All items and the questionnaire as a whole were originally tested (Engs, 1977; Hanson, 1972) prior to the first time the questionnaire was administered to students for this trend study. Instructions for completion of the instrument explained the voluntary nature of participation, as approved by the authors' institutional review boards. The instrument demonstrated internal consistency reliability of .79, and it has been used widely by numerous researchers. Updated reliability (Engs and Hanson, 1994) demonstrated a Spearman-Brown reliability coefficient of .84 for the Quantity/Frequency and .89 for the Problems Related to Drinking subscales. The values for Cronbach alpha reliability were .86 and .92, respectively, for these subscales.

Sample

The sample is part of an ongoing study of drinking patterns and problems of students attending 4-year colleges and universities from every state in the United States, from which data have been collected four times since 1982. The institutions were originally selected as part of a quota sample that represented all 4-year institutions of higher education in terms of financial support, number of students enrolled, and size of community location.

At each sampling period the researchers contacted sociology, health, or physical education faculty who were teaching survey-type classes that had a high probability of including students from every academic major and class year. These faculty were asked to distribute the SAQ to students for in-class completion and to return the completed questionnaires to the researchers. The return rate for complete and usable questionnaires exceeded 97 percent at each time period.

Instructions to both the faculty and the students remained identical throughout the entire study period.

The resulting sample consisted of students from 68 colleges and universities, some of which were the same throughout the period while others were matched with the institutions that did not participate at a particular time period. When a sample university was not available for a given time period, a similar institution matched for size and funding source in the same state was used. The demographic composition of the resulting sample of 4,845 students during the 1990-1991 time period closely approximated that of the earlier samples as well as that of the universe of students attending baccalaureate institutions of higher learning in the United States. The major exception is that females were over represented in all four time periods and constituted from 60 to 62 percent of each sample. Since gender consistently has been found by most researchers to be a primary factor related to drinking problems, it is important to note that there were no significant changes in the percentages of males or females between any of the four time periods ($X^2 = 7.3$, $df = 3$, $p = .06$). For all four time periods the percentages of nonwhite students were similar to U.S. national statistics.¹

Total sample sizes were 5,406 in 1987-1988; 4,034 in 1984-1985; and 5,252 for the 1982-1983 time period. Because of its large size, the sample had high power for detecting non-significant differences.

Calculations

Mean number of drinks per week. Based on a method suggested by Lemmens et al, (1988) and adapted by Gliksmann et al. (1989), the mean number of drinks consumed on a weekly basis was computed. For these calculations the instrument assessed the usual frequency and quantity of beer, wine, and spirits consumed by students. The frequency and quantity response categories were assigned constant values.² To compute the total number of drinks consumed on a weekly basis, a mean score was calculated by multiplying the recoded quantity by the recoded frequency weight for each beverage type and summing the three scores.

A one-way analysis of variance was used to compare the mean numbers of drinks consumed for the four time periods. The Scheffe was used as a post-hoc test to determine where differences occurred.

Quantity/frequency drinking level. Based upon a method suggested by Cahalen et al. (1969) and adapted by Engs (1977), quantity/frequency levels of drinking were calculated. Individuals were classified into four categories: Abstainers, Light, Moderate, and Heavy [sometimes called "binge"] Drinkers.³ The percentages of students in these four drinking categories in the four time periods were used to determine possible differences in alcohol use patterns over time. These were analyzed by Chi-Square analysis. A drinker was defined as someone who had consumed alcohol at least once during the previous year.

Violent/legal problems. Only students categorized as drinkers were asked to report on problem behaviors associated with drinking. Four violent/legal problems related to drinking were examined: two violent problems, namely, "fights" and "vandalism," and two problems that are considered indirect indicators of violence, namely, "trouble with the law" and "trouble with the

school administration." Chi-square analyses were used to determine possible differences in the percentages of students exhibiting each problem in each time period. In addition, a mean violence score was calculated for each student by assigning one point for each of the four problems experienced at least once during the previous 12 months. These scores were subjected to one-way analysis of variance over the four time periods. A post-hoc Scheffe test was used.

Results

Drinking Patterns

Among the total sample of students, there was a significant decrease ($X^2 = 15.2$, $df = 3$, $p < .001$) over the decade in the percentage of students who drank. There was also a significant decrease in the percentage of Moderate ($X^2 = 28.8$, $df = 3$, $p < .001$) drinkers. In contrast, there was a significant increase in the percentage of Light ($X^2 = 11.3$, $df = 3$, $p < .001$) drinkers. Although Table 1 appears to show an increase in the percentage of heavy drinkers, among all drinkers, there was no statistically significant difference.

The one-way analysis of variance reported in Table 2 revealed significant differences in the mean numbers of drinks consumed per week ($p < .001$) among all drinkers between the time periods. The post-hoc Scheffe indicated that significant pairs were between the 1982, 1985, and the 1991 time periods and between the 1982 and the 1988 time periods. Likewise, ANOVA revealed significant ($p < .05$) differences in the mean numbers of drinks among the four time periods for both the moderate and the light drinkers. The post-hoc Scheffe test for both of these categories indicated that the significant pairs were between the first two and the last two time periods (1982 versus 1985 and 1987 versus 1991). Among heavy drinkers, a significant difference ($p < .05$) occurred between the first (1982) and the last (1991) time periods, which was revealed only by the post-hoc Scheffe test.

Violent/Legal Problems Related to Drinking

The chi-square analyses reported in Table 3 for all drinkers revealed significant increases in the proportions of students who indicated they had "been in a fight" ($X^2 = 67.7$, $df = 3$, $p < .001$), "damaged property" ($X^2 = 8.6$, $df = 3$, $p < .05$), had "trouble with the law" ($X^2 = 58.7$, $df = 3$, $p < .001$), or had "trouble with the school administration" ($X^2 = 9.1$, $df = 3$, $p < .05$) over the four time periods.

Among moderate drinkers, there were significant differences among the four time periods in the percentages of students who reported "getting into a fight after drinking" ($X^2 = 30.7$, $df = 3$, $p < .001$) and "trouble with the law" ($X^2 = 12.1$, $df = 3$, $p < .05$). For light drinkers, the only significant change occurred for "trouble with the law" ($X^2 = 12.6$, $df = 3$, $p < .05$). For heavy drinkers there were significant increases in "trouble with the law" ($X^2 = 36.1$, $df = 3$, $p < .001$) and "getting into a fight after drinking" ($X^2 = 32.6$, $df = 3$, $p < .001$).

The ANOVA results for the mean number of problems related to drinking for all drinkers revealed significant ($p < .001$) differences, as shown in Table 2, among the four time periods. The post-hoc Scheffe test indicated that the significant pairs were between the 1982 data and both the 1988 and 1991 data. ANOVA results for moderate drinkers revealed a significant ($p <$

.05) difference over the four time periods. The Scheffe revealed that differences occurred between the 1982 and the last two time periods only. For heavy drinkers there were significant ($p < .000$) differences among the four time periods. The post-hoc Scheffe test revealed that the significant pairs were between the first two and the last two time periods. There were no significant differences for the light drinkers in the mean numbers of problems related to drinking over the four time periods.

Discussion and Conclusions

Over the decade of the 1980s there were decreases both in the percentage of students who drank and in the mean number of drinks consumed per week among all drinking categories. This appears to reflect the national trend, which also showed decreasing alcohol consumption over the decade, thus supporting the Cultural Theory of behavior.

There was no significant change in the percentage of heavy drinkers; however, this sample group did show a decrease over the decade in the mean number of drinks consumed per week. On the other hand, heavy drinkers consumed almost three times as much alcohol as the moderate drinkers in all time periods. Moreover, their level of alcohol consumption entails a high probability of serious alcohol-related problems. These results, however, do not appear to support the recent assertions by news media that college students are engaged in both increased drinking and heavy drinking behaviors. Therefore, Subculture Theory concerning increased heavy drinking among college students was not supported by these data.

On the other hand, there were increases in the percentages of students who indicated they had experienced certain violent/legal alcohol-related problems over the four time periods. For the behaviors of "trouble with the law" and "getting into a fight after drinking," almost twice the percentage exhibited the behavior in 1991 compared to 1982 among all drinkers. Each subcategory of drinkers also showed an increase for "trouble with the law" as a result of drinking over the decade. For "damage to property" and "trouble with the school administration," there was no significant difference in any category except for the aggregate of students as a whole.

About three times the percentage of heavy drinkers engaged in vandalism and about four times the percentage had trouble with the school administration compared to moderate drinkers. Over a third of these heavy drinkers had been in a fight, and about a quarter had engaged in vandalism in the previous 12 months during the latter part of the decade. Moreover, the heavy drinkers were almost twice as likely to get into legal trouble in 1991 compared to 1982. Since the heavy drinkers composed almost 30 percent of the sample's drinking population in 1991, there is cause for concern among campus law enforcement and administrative personnel.

Increases in the mean number of problems related to drinking occurred primarily between the 1982 and the 1987 and 1991 time periods for all drinkers and for moderate drinkers. For heavy drinkers the significant increases in problems occurred between the two periods before and the two periods after 1985. There was no significant change in the mean number of problems for the light drinkers. These results appear to support the contention that violent behaviors related to drinking have increased since the 1980s on U.S. college campuses. They also support the

Cultural Theory of behavior since this violence appears to reflect the increased violent behavior, much of it related to alcohol, in U.S. society as a whole after 1985.

However, there could be other explanations for higher proportions of each drinking subcategory reporting trouble with the law because of their drinking behaviors after 1985. For example, law enforcement and the criminal justice system might have increased efforts to curtail alcohol-related violence and illegal alcohol-related activity during the period examined. Likewise, increases in "trouble with the school administration" might reflect increased efforts by administrators to identify problem drinkers.

It must be noted that there are several limitations of the study that could have influenced these results. First, the respondents did not constitute a probability sample; rather, they were selected from students who were enrolled in survey-type classes. Second, students at matched institutions that were substituted for colleges that were unavailable at particular time periods might be statistically different in some unknown relevant characteristics. In addition, students might have defined the meaning of the questionnaire items differently over time. For example, it is not known whether they defined trouble with the law or trouble with the school administration the same way in 1990-1991 as they had ten years earlier. And, of course, social and legal responses to their behavior might have changed. Importantly, these data cannot constitute a complete test of the hypotheses since numerous alternative hypotheses might exist to explain the findings. Therefore, it is important to test the study hypotheses with different types of data, using diverse research designs. Nevertheless, for whatever cause of causes, there does appear to have been an increase in violent/legal drinking problems among college students. For this reason, it is recommended that educational programming, campus policies, and interdiction by law enforcement personnel be increased to curtail violent behavior related to alcohol abuse.

In conclusion, it appears that fewer students are drinking and that those who drink are consuming less alcohol than at the beginning of the 1980s. However, there has been an increase in violent/legal behaviors related to alcohol consumption among students. Both of these trends appear to reflect the decrease in alcohol consumption and increase in alcohol-related violence in the United States. Thus, these findings are consistent with the Cultural Theory of behavior.

Acknowledgements

This study was supported by funding from Indiana University and the State University of New York, Potsdam. We wish to thank David Kocaja and John Samuel, Indiana University for statistical and computer consultation.

Notes

1. For Gender, the percentages of females in 1982, 1985, 1988, and 1991 were 60.2, 62.4, 59.9, and 60.9, respectively. With regard to race, nonwhites represented 13.6, 14.0, 14.7, and 12.1 percent, respectively. For university students as a whole in the United States in 1982, 52 percent were female and 14 percent were nonwhite; in 1989, 58 percent were female and 15 percent were nonwhite in the United States (Department of Commerce, Statistical Abstract of the United States, 158-59).

2. Loading values for usual frequency of drinking by each respondent were: every day = 7.0; at least once a week but not daily = 3.5; at least once a month but not weekly = .05; more than once a year but not monthly = 0.12; once a year or less = 0.02; never = 0. Values for number of drinks of beer, wine, and distilled spirits were: 7+ = 7.5; 5-6 = 5.5; 3-4 = 3.5; 1-2 = 1.5; <1 = 0.5; 0 = 0.

3. The Quantity-Frequency measure for each subject was calculated from the beverage (beer, wine, or distilled spirits) most frequently used and the amount consumed on a typical occasion. Drinking category of Abstainer: drinks less than once a year or not at all; Light Drinker: drinks at least once a month but not weekly and consumes no more than 1 to 2 drinks at any one sitting; Moderate Drinker: drinks at least once a month but not weekly and consumes no more than 5 to 6 drinks per occasion, drinks at least once a week but not daily and consumes no more than 3 to 4 drinks per sitting, or drinks once a day but consumes no more than 1 or 2 drinks; Heavy Drinker: drinks more than 5 drinks at any one sitting once a week or more frequently.

References

- Abbey, A. (1991). Acquaintance rape and alcohol consumption on college campuses: How are they linked? *J Am Coll Health* 39:165-69.
- Bassis, M.S.; Gelles, R.J.; and Levine, A. (1991). *Sociology*. 4th ed. New York: McGraw-Hill.
- Bierstedt, R. (1963). *The social order*. New York: McGraw-Hill.
- Brooks, S.D.; Williams, G.D.; Stinson, F.S.; and Noble, J. (1989). *Apparent per capita alcohol consumption: National, state and regional trends 1977-1987*. Rockville, MD: NIAAA (ADAHMA).
- Cahalen, D., Cisin, I.H.; and Crossley, H.M. (1969). *American drinking practices: a national study of drinking behavior and attitudes*. (Rutgers Center of Alcohol Studies, Monog. No. 6). New Brunswick, NJ: Rutgers Center of Alcohol Studies.
- Collins, J. (1984). *Drinking and crime: Perspectives on the relationships between alcohol consumption and criminal behavior*. New York: Guilford Alcohol Studies Series.
- Engs, R.C. (1977). Drinking patterns and drinking problems of college students. *J Stud Alcohol* 38(11):2144-56.
- Engs, R.C. (1990). Family background of alcohol abuse in relationship to alcohol consumption among college students: An unexpected finding. *J Stud Alcohol* 51(6):542-47.
- Engs, R.C. (1975). *The student alcohol questionnaire*. Bloomington, IN: Indiana University
- Engs, R.C. and Hanson, D.J. (1986). Age- specific alcohol prohibition and college students' drinking problems. *Psychol Rep* 59:979-84.

Engs, R.C. (1989a). Alcohol knowledge of college students over time. *Health Educ* 110(2):179-85.

Engs, R.C. (1985). The drinking patterns and problems of college students: 1983. *J Alcohol & Drug Educ* 31(1):65-83.

Engs, R.C. (1990). Gender differences in drinking patterns and problems among college students: A review of the literature. *J Alcohol & Drug Educ* 35:36-47.

Engs, R.C. (1989b). Reactance theory: A test with collegiate drinking. *Psychol Rep* 64:1083-86

Engs, R.C. (1994). The student alcohol questionnaire: An updated reliability of the drinking patterns, problems, knowledge and attitude subscales. *Psychol Rep* 74:12-14.

Engs (1988). University student drinking patterns and problems: Examining the effect of raising the purchase age. *Pub Health Rep* 103(6):667-73.

Engs, R.C.; Hanson, D.J.; and Glicksman, L. (1990). Influence of religion and culture on drinking behaviours: a test of hypotheses between Canada and the USA. *Brit J Addict* 85:1475-82.

Fine, G.A. (1987). *With the boys: Little league baseball and preadolescent culture*. Chicago: University of Chicago Press.

Fine, G.A. and Kleinman, S. (1979). Rethinking subculture: An interactionist analysis. *Am J Soc* 85(1):1-20.

Glicksman, L.; Engs, R.C.; and Smyth, C. (1989). *The drinking, drug use and lifestyle patterns of Ontario's university students*. Toronto: Addiction Research Foundation.

Gonzalez, G. (1989). Effect of raising the drinking age among college students in Florida. *Coll Stud J* 67-75.

Hanson, D.J. (1972). Norm qualities and deviant drinking behavior. PhD. dissertation, Syracuse University.

Hanson, D.J. and Engs, R.C. (1990). Black college students' drinking patterns. In *The sociocultural matrix of alcohol and drug use: A sourcebook on patterns, preventions, and treatments*, ed. B. Forster, Lewiston, NY: Edwin Mellen Press.

Hanson, D.J. and Engs, R.C. (1984). College students' drinking attitudes: 1970-1982. *Psychol Rep* 54:300-02.

Hanson, D.J. and Engs, R.C. (1986). College students' drinking problems: 1982-1985. *Psychol Rep* 58:276-78.

- Hanson, D.J. and Engs, R.C. (1992). College students' drinking problems: A national study, 1982-1991. *Psychol Rep* 71:39-42.
- Hanson, D.J. and Engs, R.C. (1987). Religion and collegiate drinking problems over time. *Psych* 24 (1/2):10-12.
- Johnson, L.D.; O'Malley, P.M.; and Bachman, J.G. (1991). *Drug use among American high school seniors, college students and young adults, 1975-1990*, vols. 1, 2. Rockville, MD: NIAAA (ADAMHA).
- Klassen, T. (1991). Most IU misconduct linked to alcohol. *Herald-Times* 19 September 1991, 2.
- Kottak, C.P. (1982). *Researching American Culture*. Ann Arbor: University of Michigan Press.
- Lemmens, P.; Tan, E.S.; and Knibbe, R. (1988). Comparison of indices of alcohol consumption: Issues of validity of self-reports. Paper presented at the Fourth Annual Alcohol Epidemiology symposium, Berkeley, California, June 5-11.
- Leonard, K.; Bromet, E.; and Parkinson, D. (1985). Patterns of alcohol use and physically aggressive behavior in men. *J Stud Alcohol* 46:279-282.
- Lunden, W.A. (1983). A decade of crimes on campus. *The Police Chief* 50:66-68.
- Lindsmith, b. (1991). Loaded questions: Why ask why? Because alcohol abuse at American colleges is so common it seems normal. *Ohio State Quest* Autumn:8-11.
- Males, M. (1990). Youth behavior: Subcultural effect or mirror of adult behavior? *J Sch Health* 60(10):505-08.
- Meilman, P.W.; Stone, J.E.; Gaylor, M.S.; and Turco, J.H. (1990) Alcohol consumption by college undergraduates: Current use and 10-year trends. *J Stud Alcohol* 51(5):389-95.
- Nisbet, R.A. (1970). *The social bond*. New York: Knopf.
- Ogbu, J.U. (1974). *The next generation: An ethnography of education in an urban neighborhood*. New York: Academic Press.
- Reed, J.S. (1972). *The enduring South: Subcultural persistence in mass society*. Lexington, MA: Heath Lexington Books.
- Rickgarn, R.L.V. (1989). Violence in residence halls: Campus domestic violence. In *Responding to violence on campus: New directions for student services*, no. 47, ed. J.M. Sherrill and D.G. Siegel. San Francisco: Jossey-Bass.
- Roark, M. (1987). Preventing violence on college campuses. *J Counsel & Devt* 65:367-70.

- Rosenberg, D. (1990). Bad times at hangover U. *Newsweek*, 19 November 1990, 81.
- Scarpetti, F.R., and Datesman, S.K. (eds.) (1980). *Drugs and the youth culture*. Beverly Hills, CA: Sage.
- Schuh, J.H.; Shipton, W.C.; and Edman, N. (1986). Counseling problems encountered by resident assistants: An update. *J Coll Stud Personnel* 27(1)26-33.
- U.S. Department of Commerce (1991). *Statistical abstracts of the United States*. National data book, 158-59. 158-59. Washington, D.C.: U.S. Department of Commerce, Bureau of Census.
- U.S. Department of Justice (1983; 1986; 1990). *Crime in the United States*. Washington, D.C.: U.S. Department of Justice.
- West, R.; Drummond, C.; and Eames, K. (1990). Alcohol consumption, problem drinking and anti-social behaviour in a sample of college students. *Brit J Addict* 85:479-86.
- Williams, R.M. (1961). *American society*, New York: Knopf.

Table 1: Chi Square Results for the Percent of Drinkers From the Total Sample and for the Percent of Heavy, Moderate, and Light Drinkers from Among All Drinkers Over Four Time Periods.[#]

	1982	1985	1988	1991
Total Sample	(N = 5,252)	(N = 4,034)	(N = 5,406)	(N = 4,845)
All drinkers	82.4	83.7	78.3	78.8*
Abstainers	17.6	16.3	21.7	21.2
Drinkers	(N = 4,324)	(N = 3,377)	(N = 4,232)	(N = 3,820)
Heavy drinkers	24.8	25.1	26.2	27.3
Moderate drinkers	51.2	51.0	48.5	45.9*
Light drinkers	24.0	23.9	25.3	45.9*

* p < .001 + p < .05

Students from each of the drinking categories were separately analyzed over time for whether or not they had exhibited the problem behavior during the previous 12 months. Table does not compare between drinking categories.

Table 2: One-Way ANOVA Results of the Mean Number of Drinks per Week and the Mean Number of Violent/Legal Problems Among Heavy, Moderate, Light and All Drinkers Over Past Decade^{\$}

	1982	1985	1988	1991
Mean drinks per week	(N = 4,324)	(N = 3,377)	(N = 4,232)	(N = 3,820)
Heavy	32.0	31.4	31.2	29.9+
Moderate	11.8	12.0	10.2	9.7*
Light	1.1	1.2.	1.0.	.9+
All drinkers	14.3	14.3	13.4	12.8+
Mean problems related to drinking	.	.	.	.
Heavy	0.63	0.64	0.81	0.84*
Moderate	0.19	0.21	0.25	0.27*
Light	0.04	0.05	0.06	0.07
All drinkers	0.26	0.27	0.34	0.37*

* $p < .001$ + $p < .05$

^{\$} Information for each of the significant groups starting from the top to the bottom of the table:

$p < .05$, $F = 4.4$. Between groups: $df = 3$, Sum of Squares = 2,684.7, Mean Squares = 894.9, Within Groups: $df = 4,067$, Sum of Squares = 834,974.5, Mean Squares = 205.3.

$p = .000$, $F = 33.6$. Between Groups: $df = 3$, Sum of Squares = 7,675.3, Mean Squares = 2,558.4. Within Groups: $df = 7,741$, Sum of Squares = 484,304.4, Mean Squares = 76.1.

$p < .05$, $F = 2.3$. Between Groups: $df = 3$, Sum of Squares = 5.7, Mean Squares = 11.9, Within Groups: $df = 3,933$, Sum of Squares = 2,890.0. Mean Squares = .7.

$p < .000$. $F = 9.3$. Between Groups: $df = 3$, Sum of Squares = 5,949.2, Mean Squares = 1,983.0. Within Groups: $df = 15,749$, Sum of Squares = 3,353,078.2, Mean Squares = 212.9.

$p < .000$, $F = 12.5$. Between Groups: $df = 3$, Sum of Squares = 11.9. Within Groups: $df = 4,067$. Sum of Squares = 3,856.7, Mean Squares = 0.95.

$p < .001$, $F = 8.2$. Between Groups: $df = 3$, Sum of Squares = 7.9, Mean Squares = 2.6. Within Groups: $df = 7,741$, Sum of Squares = 2,485.1, Mean Squares = 0.3.

$p < .000$, $F = 21.7$. Between Groups: $df = 3$, Sum of Squares = 31.9, Mean Squares = 10.6, Within Groups: $df = 15,749$, Sum of Squares = 7,711.6, Mean Squares = 0.5.

Table 3: Chi-Square Analysis of the Percent of Heavy Drinkers, Moderate Drinkers, Light Drinkers, and All Drinkers Who Indicated They Had Experienced legal/violence problems associated with Drinking over the Past Decade

	1982	1985	1988	1991
<u>Behavior</u>	(N = 4,324)	(N = 3,377)	(N = 4,232)	(N = 3,820)
Got into a fight after drinking	.	.	.	.
Heavy	25.9	25.2	32.3	35.0*
Moderate	8.9	9.7	11.7	14.2+
Heavy	2.3	2.6	3.0	4.2
All	11.6	11.9	15.0	17.2*
Damaged property, vandalism, etc	.	.	.	.
Heavy	22.1	24.0	26.4	24.3
Moderate	6.7	6.9	8.0	7.8
Light	1.4	1.5	1.0	0.8
All	9.3	9.9	11.2	10.5+
Trouble with the law				
Heavy	11.5	10.2	15.9	18.6*
Moderate	2.0	2.0	2.6	3.5+
Light	0.4	0.6	0.8	1.8+
All	4.4	4.1	6.1	7.6*
Trouble with school administration				
Heavy	4.6	4.4	6.5	6.3
Moderate	1.4	1.3	1.7	1.3
Light	0.3	0.3	0.5	0.6
All	1.9	1.8	2.7	2.5+

* p < .001 + p < .05